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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,737	03/16/2004	Shoji Kodama	274.43200X00	1167

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SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER
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KO, DANIEL BOKMIN

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,737	<b>Applicant(s)</b> KODAMA, SHOJI	
	<b>Examiner</b> Daniel B. Ko	<b>Art Unit</b> 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 11, 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 13, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/25/2005</u> | 6) <input type="checkbox"/> Other: _____   |

### **DETAILED ACTION**

This action is responsive to the application filed on March 16, 2004. Claims 1-17 have been submitted for examination.

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10, 12-13, 16, and 17, drawn to a write once read memory (WORM) that uses a next write pointer, classified in class 711, subclass 163.
- II. Claims 11, 14, and 15, drawn to a write once read memory (WORM) that uses the beginning and ending offsets, classified in class 711, subclass 152.

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as used in the system that need a next write pointer. See MPEP § 806.05(d).

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant's election without traverse of claims 1-10, 12-13, 16 and 17 over the telephone restriction practice is acknowledged. Applicant's election was given in a telephone interview with Shrinath Malur (Reg. #: 34663) on April 28, 2006.

Claims 11, 14 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 8/25/2006 is considered by the examiner.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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1. Claim 8 recites the limitation "said retention period" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 3, 5-6 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Freeman et al. (U.S. Patent 6,108,285), hereinafter simply Freeman.

Regarding claim 1, Freeman teaches a storage system for protecting data stored on a volume of said storage system comprising:

a storage media upon which said volume is represented (column 2, lines 5-14; column 4, lines 30-43);

a disk controller which controls said storage system (column 4, lines 30-51); and

a write once read many (WORM) configuration table having a plurality of entries which indicate by use of a next write pointer (Fig. 6, Next/Previous Path Directory Entry Pointer, column 5, lines 61-66) which of a plurality of areas of said volume is write protected (column 5, lines 11-12).

Regarding claim 3, Freeman teaches a storage system according to claim 1, wherein said entries indicate a size of each of said areas of said volume (Fig. 5, Total Number of Blocks and Number of Bytes/Block; column 5, lines 4-10).

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Regarding claims 5 and 12, Freeman teaches a storage system, wherein said areas are each a block of storage of said volume identifiable by a block number (Fig. 5, Number of Blocks/Track; column 5, lines 4-10), and

Wherein the block numbers for said volume start at zero corresponding to a first storage location of said volume (Fig. 7, Starting Block Address of the file; column 6, lines 13-14) and increases in increments of one until the last storage location of said volume (Fig. 11A, step 1113; column 10, lines 15-16).

Regarding claim 6, Freeman teaches a storage system, wherein said next write pointer has a block number of a storage location at which data can be written (Fig. 5, Number of Blocks/Track; column 5, lines 4-10), and wherein said next write pointer indicates that data can not be written to blocks having a block number less than the block number of said next write pointer (column 3, lines 9-17).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 2, 4, 7-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al. (U.S. Patent 6,108,285), hereinafter simply Freeman, in view of Harding et al. (U.S. Patent 4,974,156), hereinafter simply Harding.

Regarding claim 7, Freeman teaches the limitations of the claims as set forth for claim 1 above. However, Freeman does not teach a retention period of the block. Harding teaches a retention period of the objects (column 5, lines 65-67). At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the Freeman with Harding. The motivation for doing so would have been an efficient use of disk space, because the retention period of data (column 5, lines 65-67) allows reusing the disk space after the retention period expires.

Regarding claims 2 and 4, it is obvious at the time of invention to show whether said volume is WORM enable or not, because it simply allows to user to use volume as WORM or not.

Regarding claim 8, Freeman shows the internal clock (Fig. 6, Creation Date/Time; column 6, lines 15-17) and Harding teaches a retention period of the objects (column 5, lines 65-67).

Regarding claims 9 and 16, Harding teaches a storage system comprising: a management console which allows for creating or deleting entries in said WORM configuration table (column 1, lines 62-68).

4. Claims 10, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al. (U.S. Patent 6,108,285), hereinafter simply Freeman, in view of Reed (U.S. Patent 6,542,971 B1).

Regarding claims 10 and 17, Freeman teaches the limitations of the claims as set forth for claims 1 and 12, above. However, Freeman does not teach checking if an offset is larger than an offset indicated by the next write pointer. Reed teaches checking if an offset is larger than an offset indicated by the next write pointer (column 5, lines 47-51; column 7, lines 35-42). At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the Freeman with Reed. The motivation for doing so would be lower power consumption in the system (column 3, lines 11-15).

Regarding claim 13, Freeman combined with Reed teach a storage system, wherein said beginning offset has a block number of a storage location at the beginning of a write protected area and said ending offset has a block number of a storage location at the end of said write protected area, and wherein data cannot be written in



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blocks corresponding to block numbers between said beginning and ending offsets

(column 5, lines 47-51; column 7, lines 35-42).

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**Conclusion**

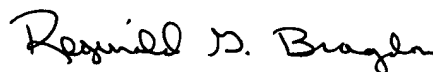
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel B. Ko whose telephone number is 571-272-8194.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel B. Ko  
AU 2189



REGINALD G. BRAGDON  
PRIMARY EXAMINER